

Customer No.: 31561
Docket No.: 12978-US-PA
Application No.: 10/710,420

AMENDMENTS

To the Specification:

Applicants have replaced all instances of "impossible to be used" in the specification with "not intended to be used". Please amend related paragraphs and the abstract as shown below.

[0009] The method, according to an embodiment of the present invention, is suitable for reducing a size of the SDF file complied with an IEEE 1497 standard, for example, by referring to a design description such as the netlist mentioned above. According to an embodiment of the present invention, first, a cell description is read from the SDF file. Next, whether or not the read cell description contains a state-dependent description is determined. In other words, the delay data of each cell's I/O path is described by a description associated to different input state of the cell; and if it is determined that the state-dependent description is present in the cell description, the state-dependent descriptions in the cell description, which are ~~impossible~~ not intended to be used, are removed by referring to a state data which is contained in the design description and is associated to the cell description.

[0011] Wherein, if it is determined that the state-dependent description is present in the cell description and there is no delay data description for the state which is

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~~impossible~~ not intended to be used, the cell description is also kept unchanged in the SDF file.

[0012] It is known from the descriptions mentioned above, when the method for reducing the SDF file size provided by the present invention is applied, since the state-dependent descriptions in the cell descriptions of the SDF file, which are ~~impossible~~ not intended to be used, had been removed, it is possible to reduce the SDF file size and the simulation result generated by the simulator is not affected with the reduced SDF file.

[0017] FIG. 2 is a schematic diagram illustrating inputs and outputs of a method of reducing the SDF file size according to an embodiment of the present invention. As shown in the diagram, the SDF reducer 230 deployed in a method for reducing the SDF file size, according to an embodiment of the present invention, to remove the state-dependent descriptions, which are ~~impossible~~ not intended to be used, from the cell descriptions of the original SDF file 220 such as IEEE 1497 SDF file, by referring to a design description 210, such as, a netlist, so as to generate a reduced size SDF file 240 such that the simulation result generated by a simulator is not affected with the reduced SDF file.

[0019] The SDF file mentioned above contains 4 state-dependent descriptions with COND, wherein I1== 0, I1== 1, I2== 0, and I2== 1 subsequent to COND indicates different logic state of the input terminals I1 and I2, respectively, and the value

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subsequent to IOPATH is the delay time of the I/O path from I1 to Y or from I2 to Y. Such complete cell description is only required in the case where the status of the input terminals I1 and I2 of cell A is unknown. If it is possible to acquire a firm status of either the input terminal I1 or I2 of the cell A by referring to a design description of the IC, for example, by referring to a netlist, the other state which is ~~impossible~~ not intended to be used will not be used by the simulator. Therefore, the SDF file is not required any more, thus it should be removed to reduce the SDF file size.

[0022] If it is determined that the state-dependent description is present in the cell description, the process proceeds to step 340, where the state-dependent descriptions in the cell description, which are ~~impossible~~ not intended to be used, are removed by referring to a state data which is present in the IC design description and is associated to the cell description, so as to reduce the SDF file size.

[0023] Wherein, if the state-dependent description is not present in the cell description, or the state-dependent description is present in the cell description, and the result obtained from referring the IC design description indicates that there is no delay data description for the state which is ~~impossible~~ not intended to be used, the cell description is kept unchanged in the SDF file, such that the accuracy of the simulation result is not affected with the reduced SDF file.